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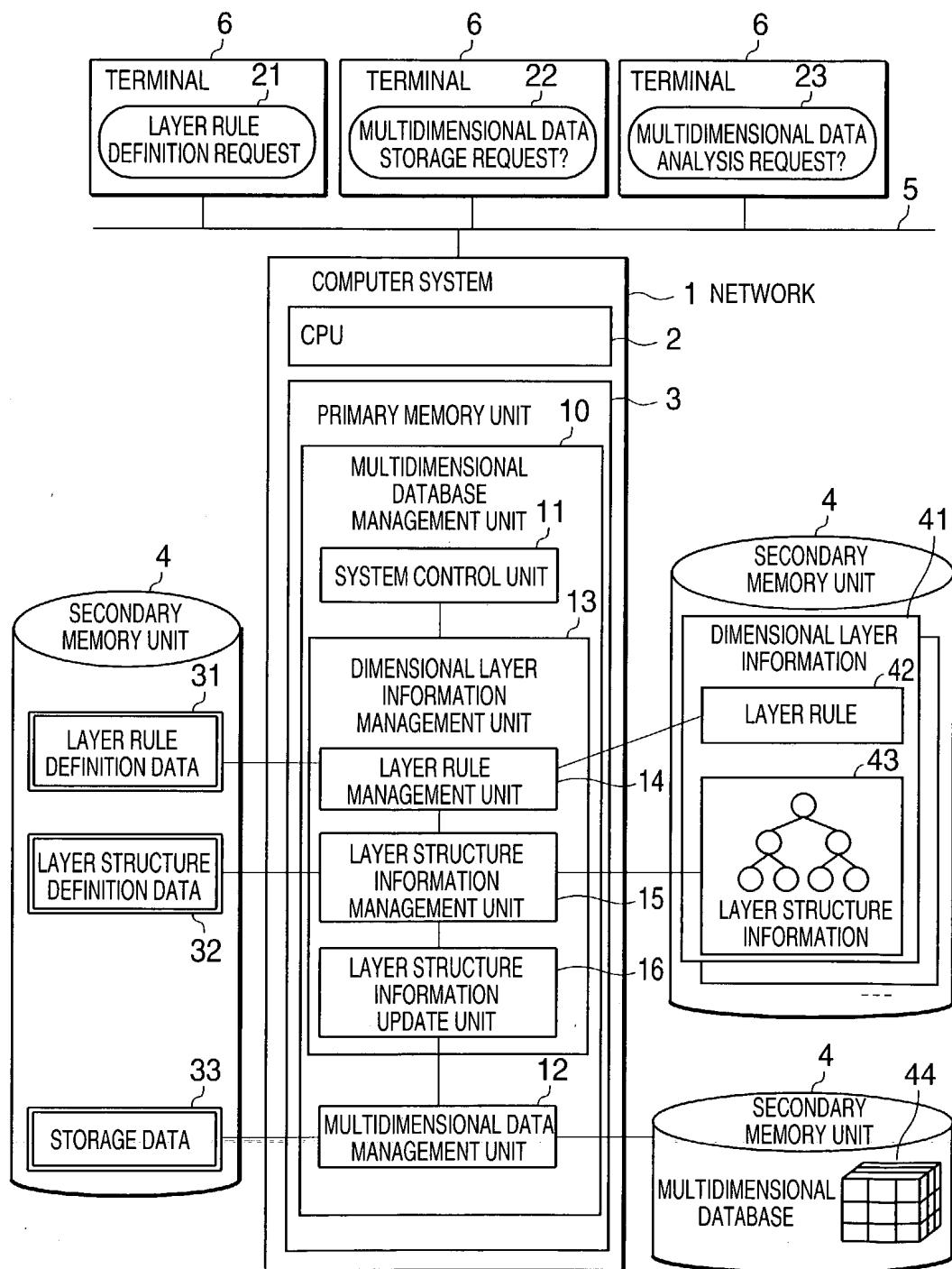
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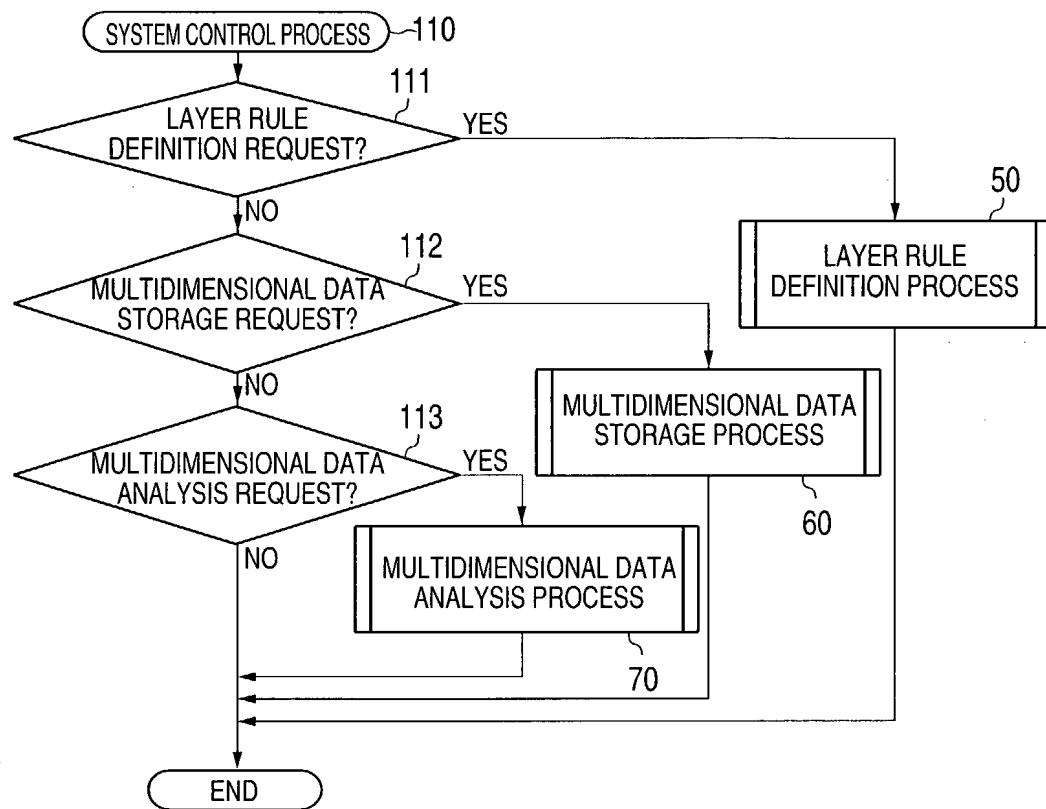


FIG.1





## FIG.2



## FIG.3

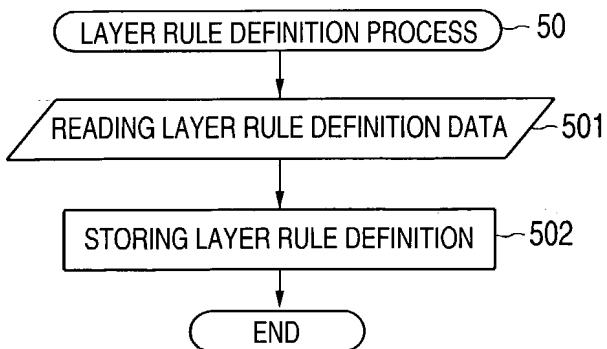


FIG.4

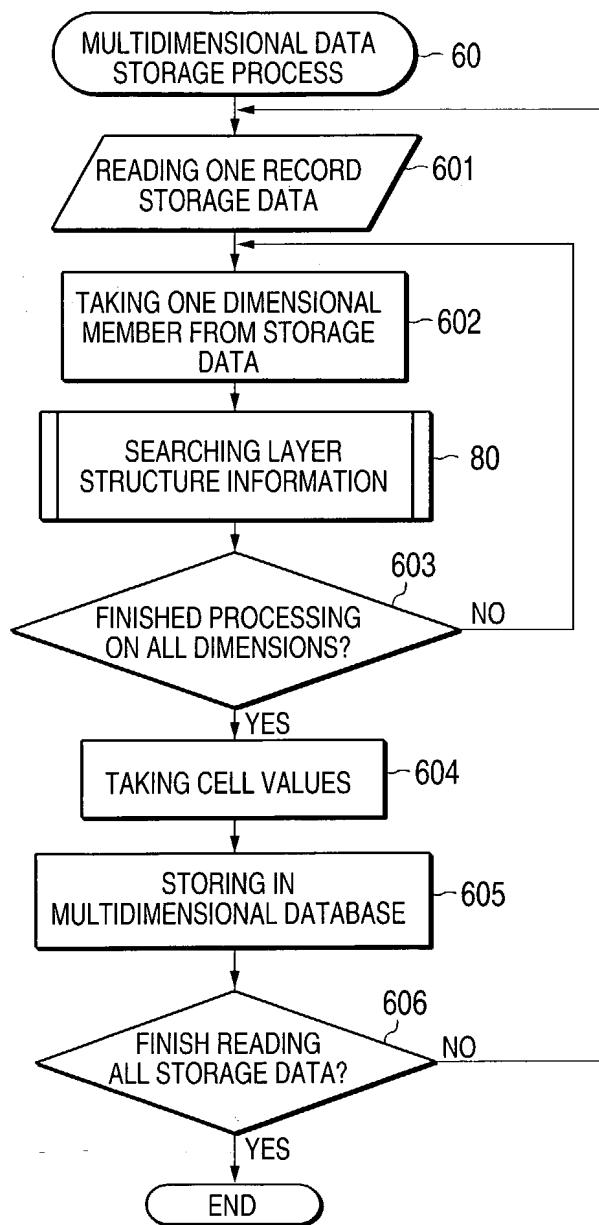
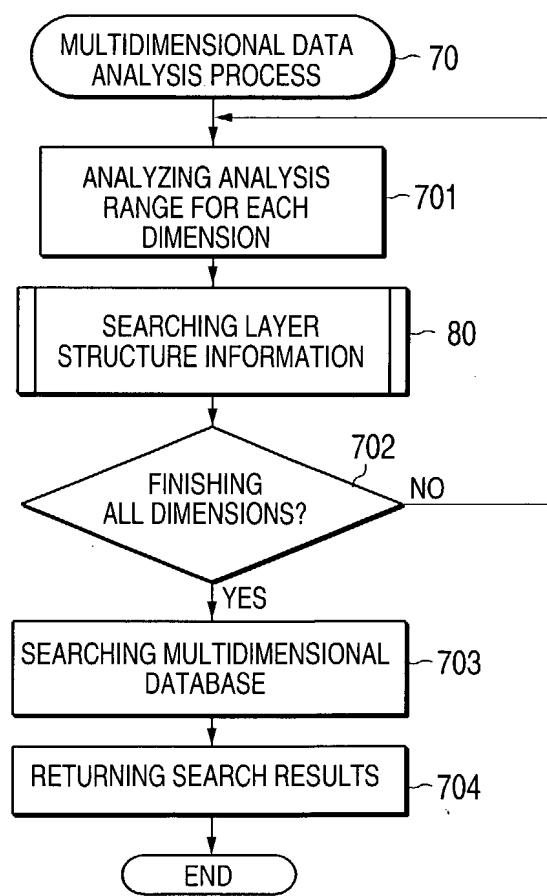


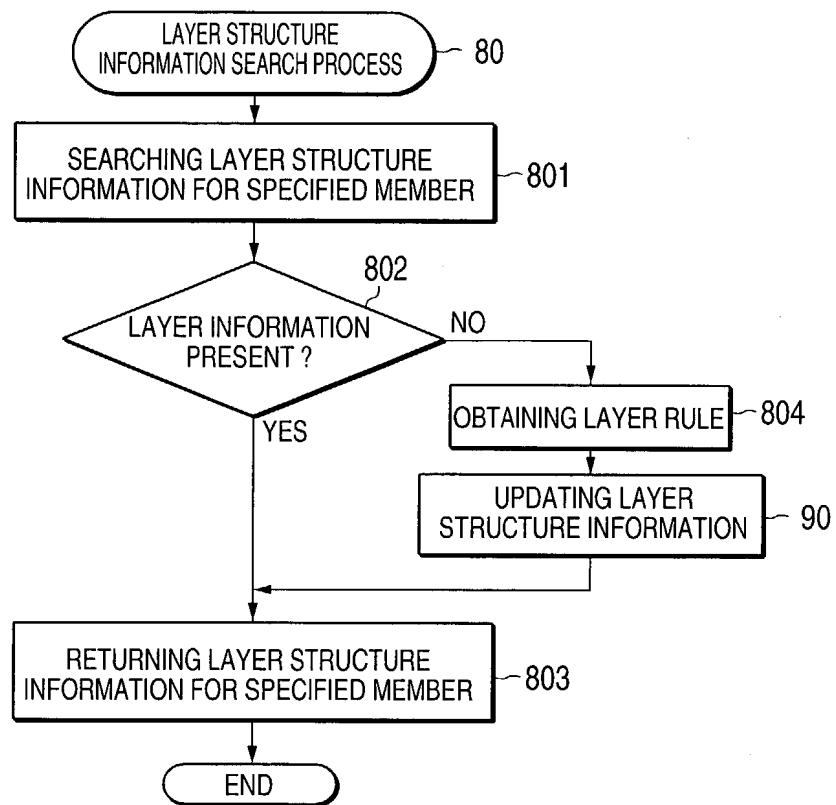


FIG.5

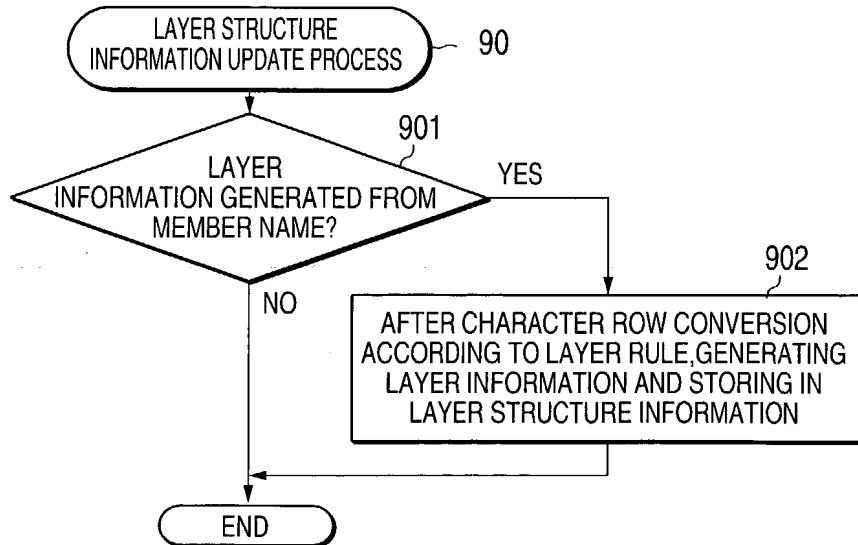




## FIG.6



## FIG.7





## FIG.8

3110

TIME DIMENSIONAL LAYER RULE DEFINITION DATA

```
#LAYER RULE :  
#AFTER CHARACTER ROW CONVERSION ON MEMBER, OBTAINING LAYER INFORMATION  
  
FROM MEMBER NAME  
LEVEL10= $ MEMBER NAME  
LEVEL11={  
  S/¥(.... \)0[123] \1Q1/  
  S/¥(.... \)0[456] \1Q2/  
  S/¥(.... \)0[789] \1Q3/  
  S/¥(.... \)1[012] \1Q4/  
}  
LEVEL12={  
  S/ (.... \).. \1/  
}
```



FIG. 9

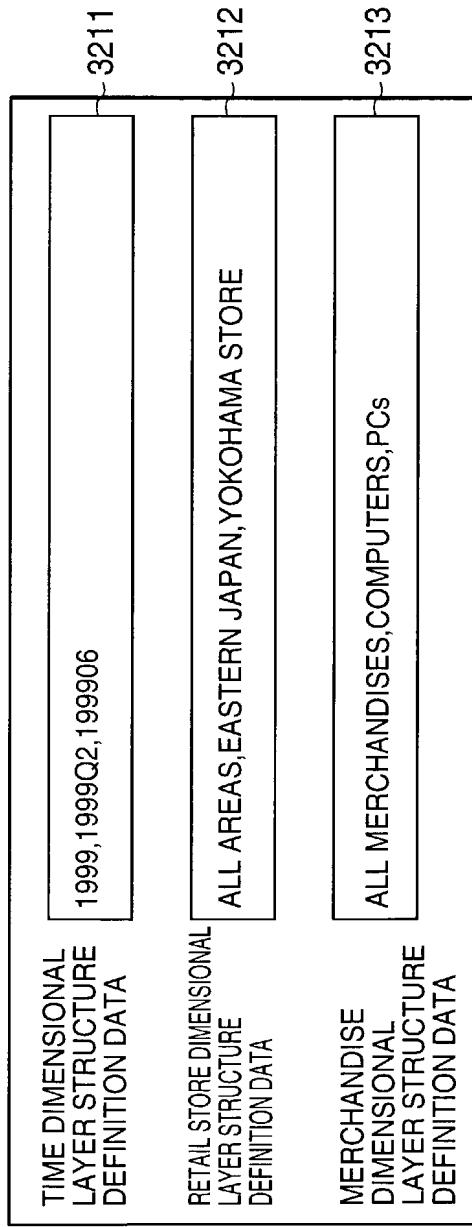
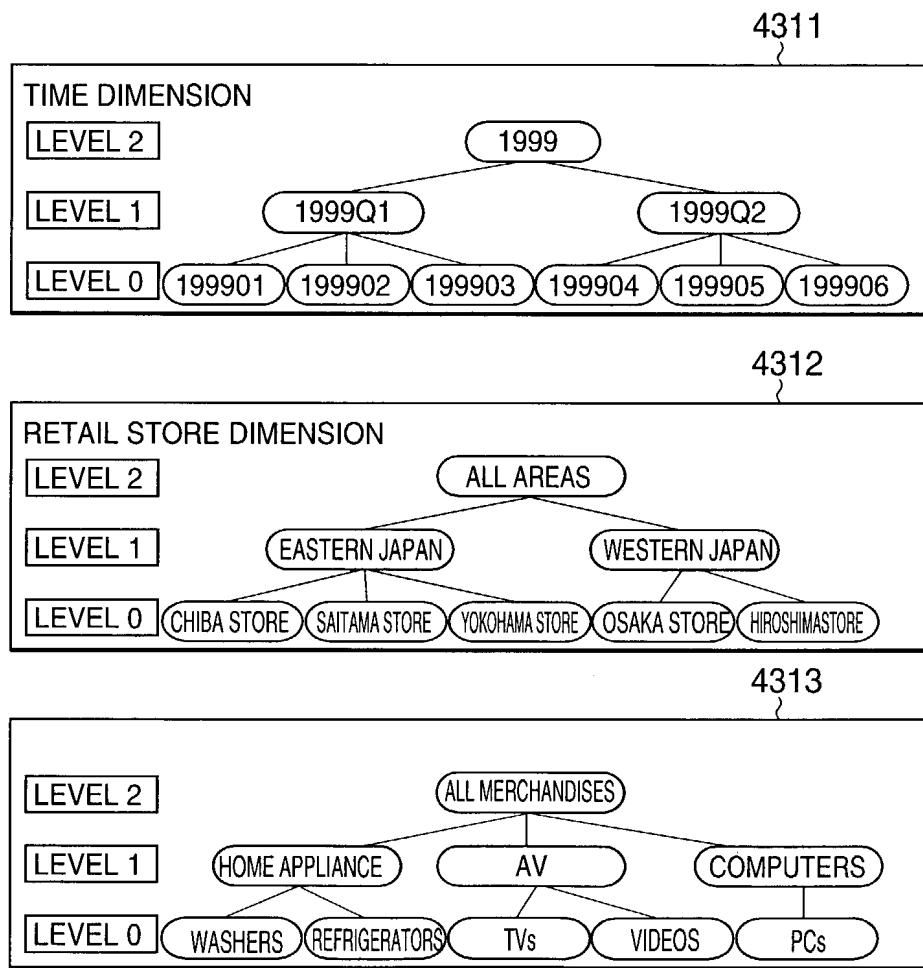




FIG.10





## FIG.11

3120

RETAIL STORE DIMENSIONAL LAYER RULE DEFINITION DATA

```
#LAYER RULE :  
#OBTAINING LAYER INFORMATION FROM CSV FORMATTED FILE  
  
FROM FILE,CSV FILE1  
LEVEL0=COLUMN 3  
LEVEL1=COLUMN 2  
LEVEL2=COLUMN 1
```

## FIG.12

3126

```
ALL AREAS,EASTERN JAPAN,CHIBA STORE  
ALL AREAS,EASTERN JAPAN,SAITAMA STORE  
ALL AREAS,EASTERN JAPAN,YOKOHAMA STORE  
ALL AREAS,WESTERN JAPAN,OSAKA STORE  
ALL AREAS,WESTERN JAPAN,HIROSHIMA STORE
```



FIG. 13

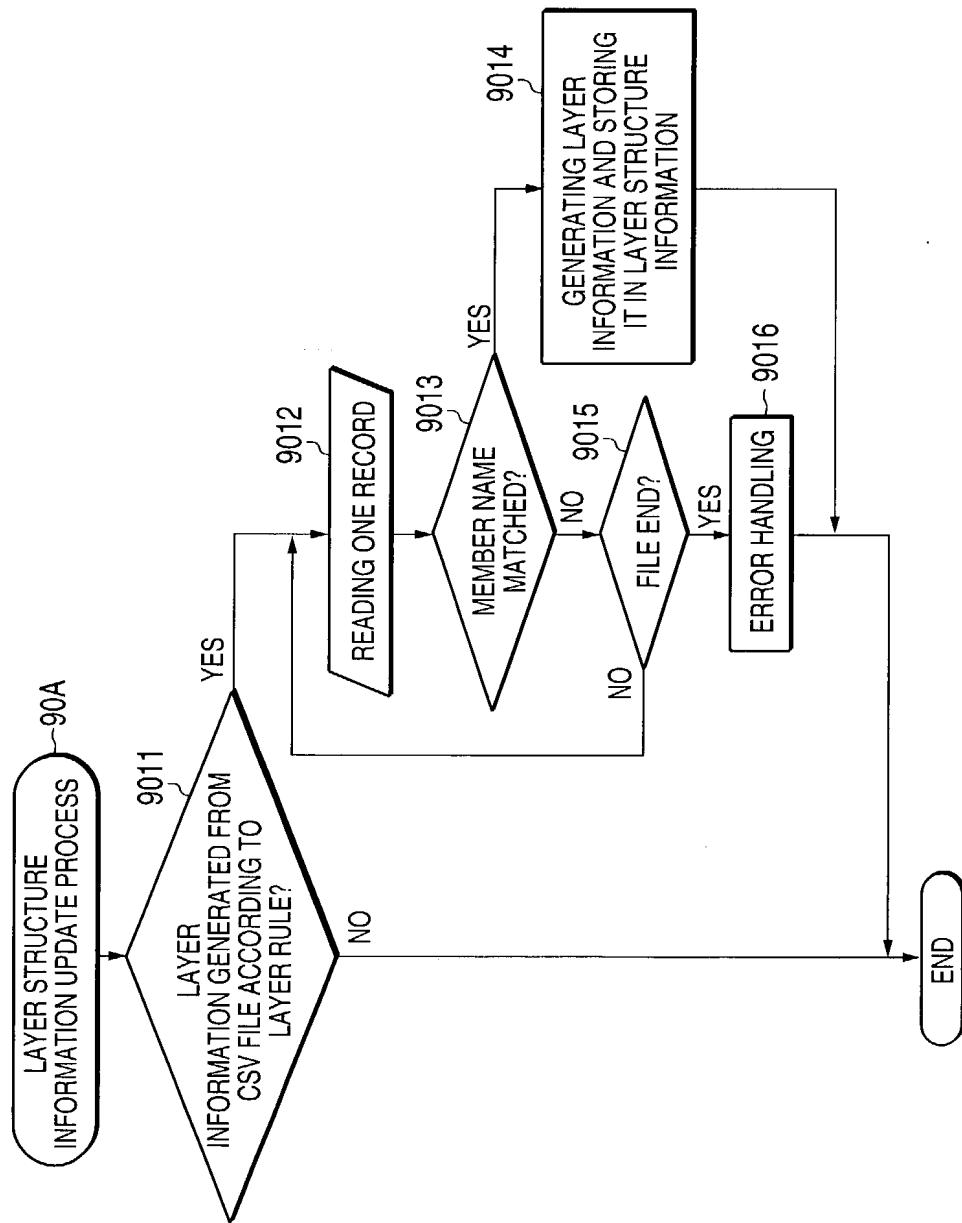
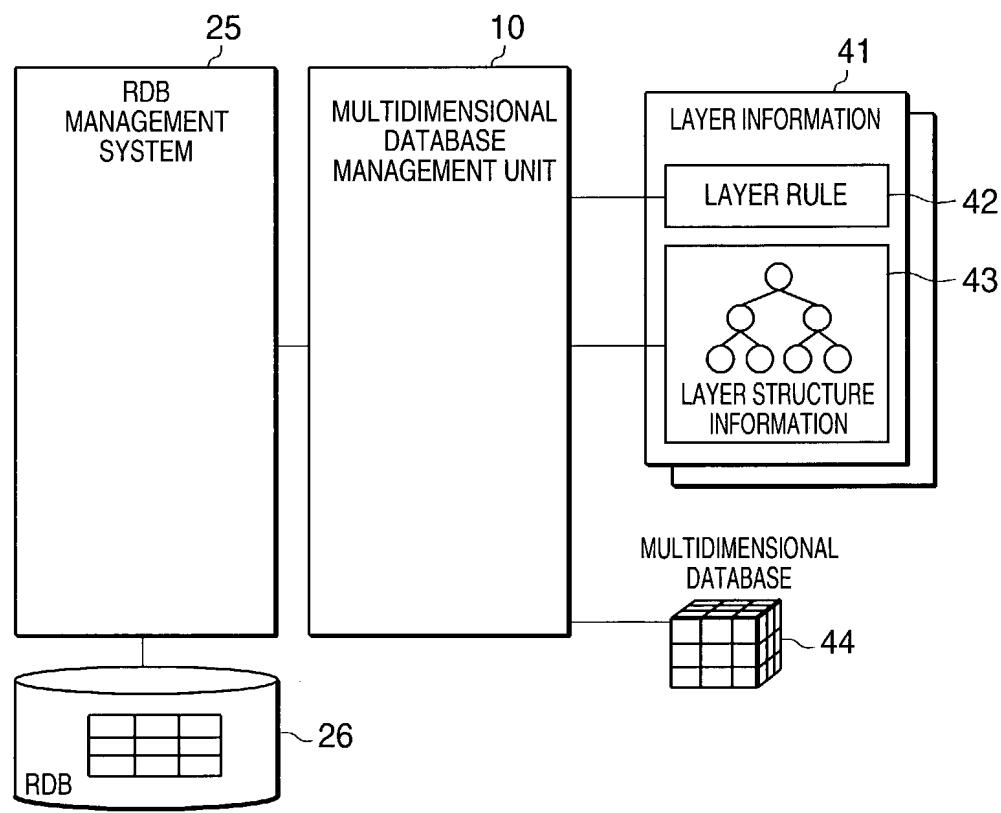




FIG.14





## FIG.15

3130 }  
MERCHANDISE DIMENSIONAL LAYER RULE DEFINITION DATA  
#LAYER RULE : RDB TABLE 'PRODUCT MASTER TABLE'  
#OBTAINING FROM COL1, COL2  
FROM RDB TABLE 'PRODUCT MASTER TABLE'  
LEVEL 0=SMALL CLASSIFICATION  
LEVEL 1=LARGE CLASSIFICATION  
LEVEL 2="ALL MERCHANDISE"

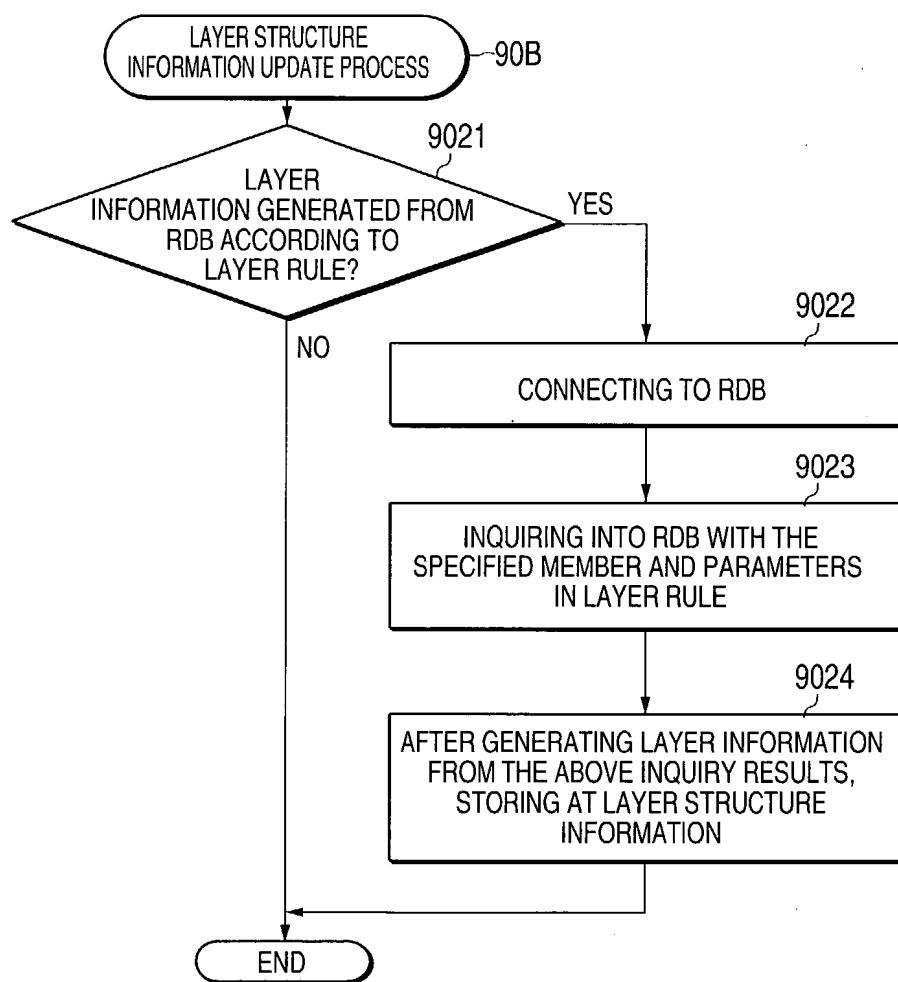
## FIG.16

CONTENT OF RDB PRODUCT MASTER TABLE

LARGE CLASSIFICATION	SMALL CLASSIFICATION
HOME APPLIANCE	WASHERS
HOME APPLIANCE	REFRIGERATORS
AV	TVs
AV	VIDEOS
COMPUTERS	PCs



FIG.17





## FIG.18

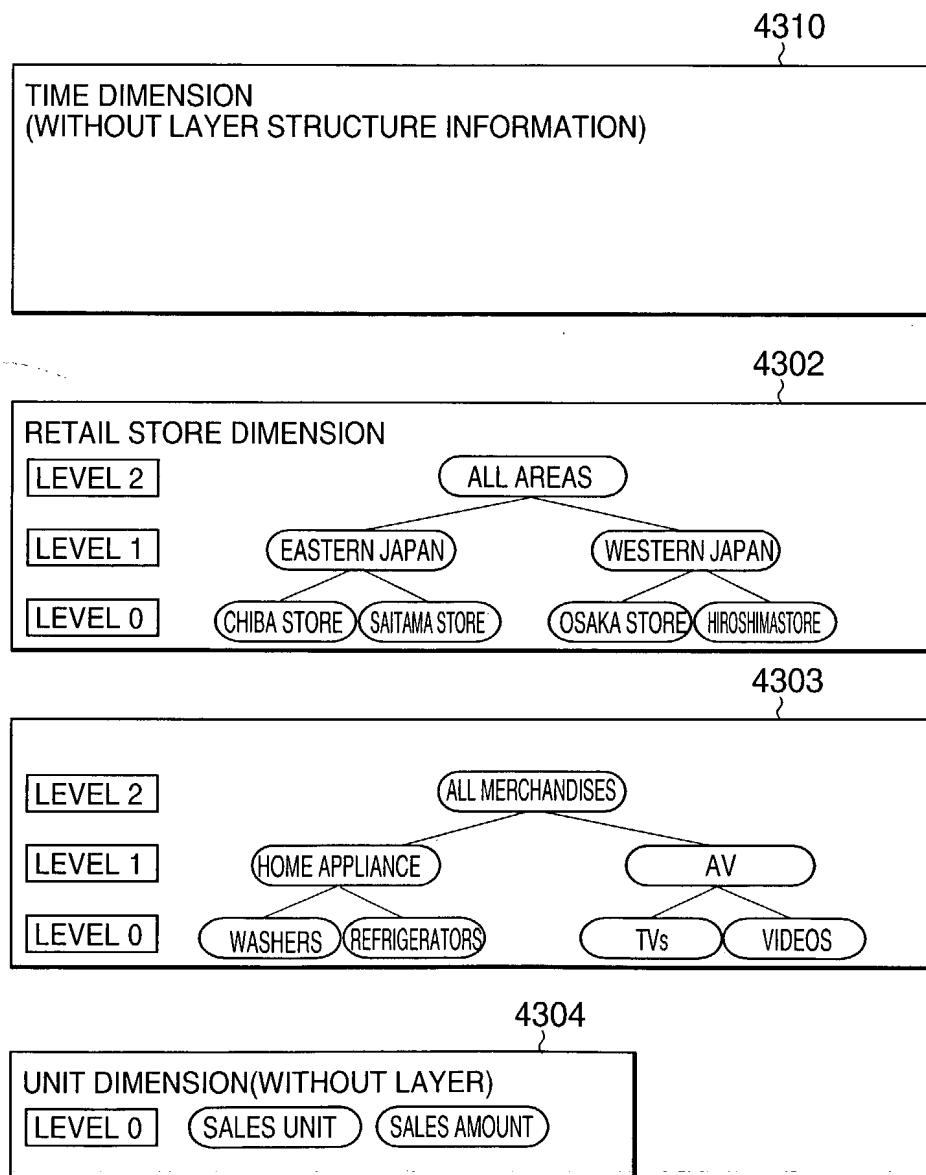
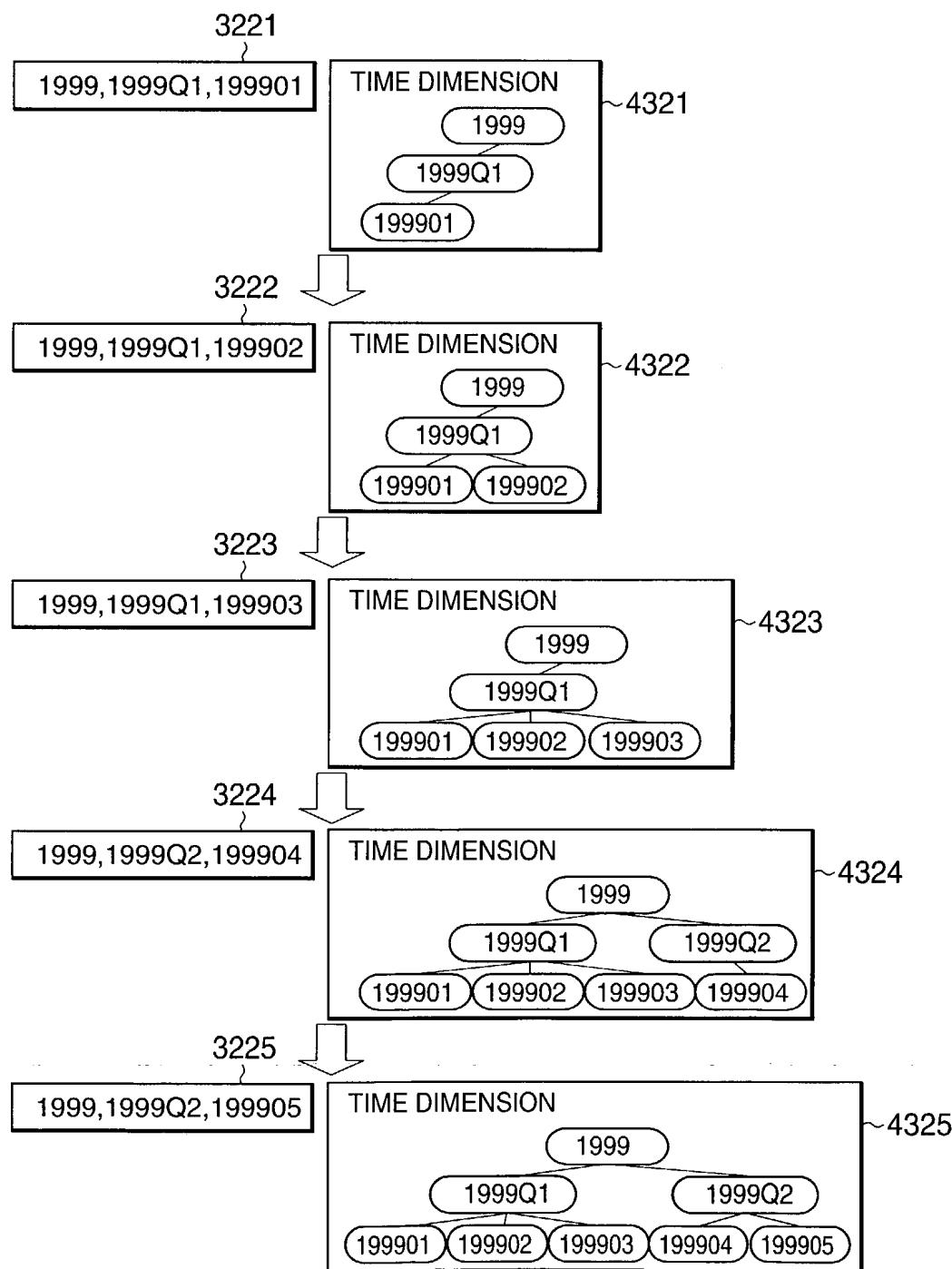


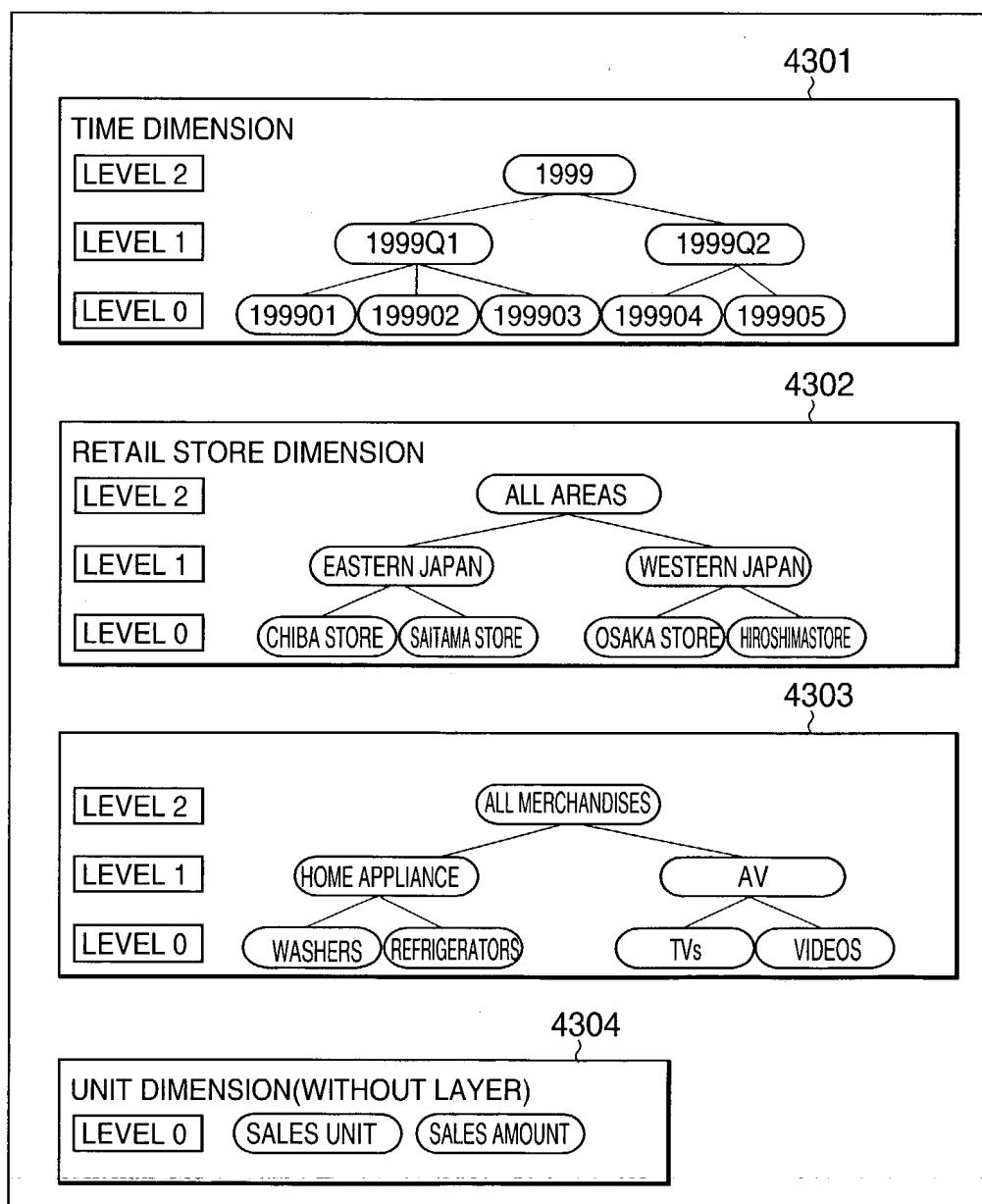


FIG.19



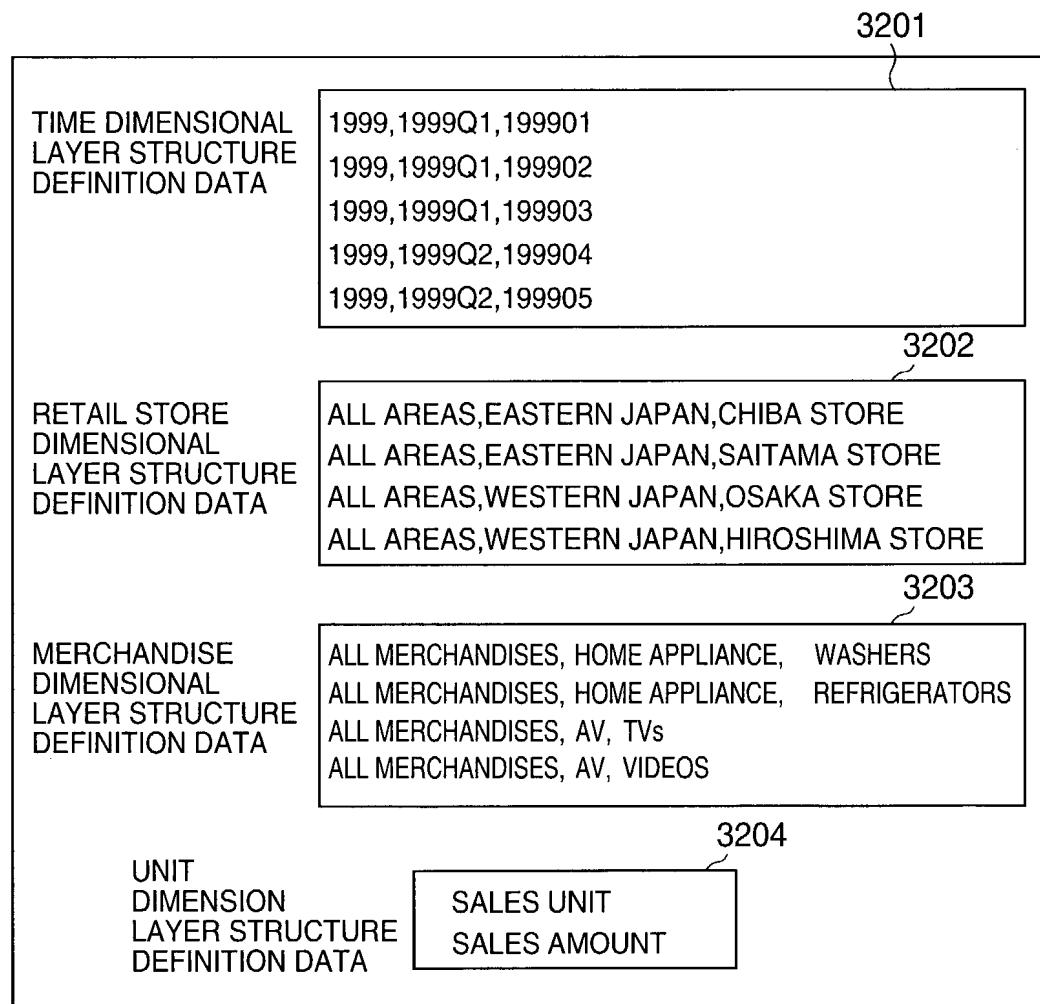


## FIG.20 PRIOR ART





## FIG.21 PRIOR ART





## FIG.22 PRIOR ART

3301

199901, SAITAMA STORE,	TVs,	22, 2420000
199901, OSAKA STORE,	REFRIGERATORS,	15, 1350000
199902, HIROSHIMA STORE,	VIDEOS,	42, 2940000
199902, SAITAMA STORE,	WASHERS,	21, 1680000
199903, CHIBA STORE,	VIDEOS,	33, 2310000
199904, HIROSHIMA STORE,	REFRIGERATORS,	18, 1620000
199905, CHIBA STORE,	TVs,	45, 4950000

⋮

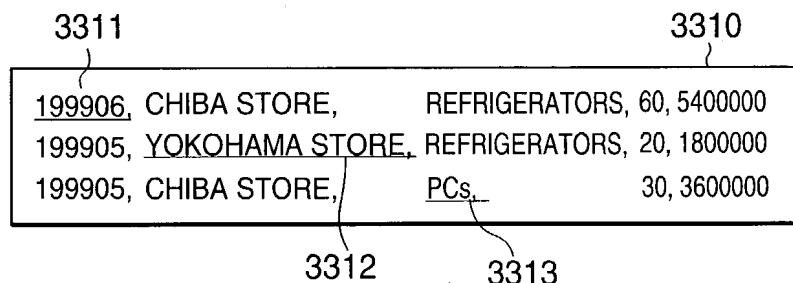


FIG.23 PRIOR ART

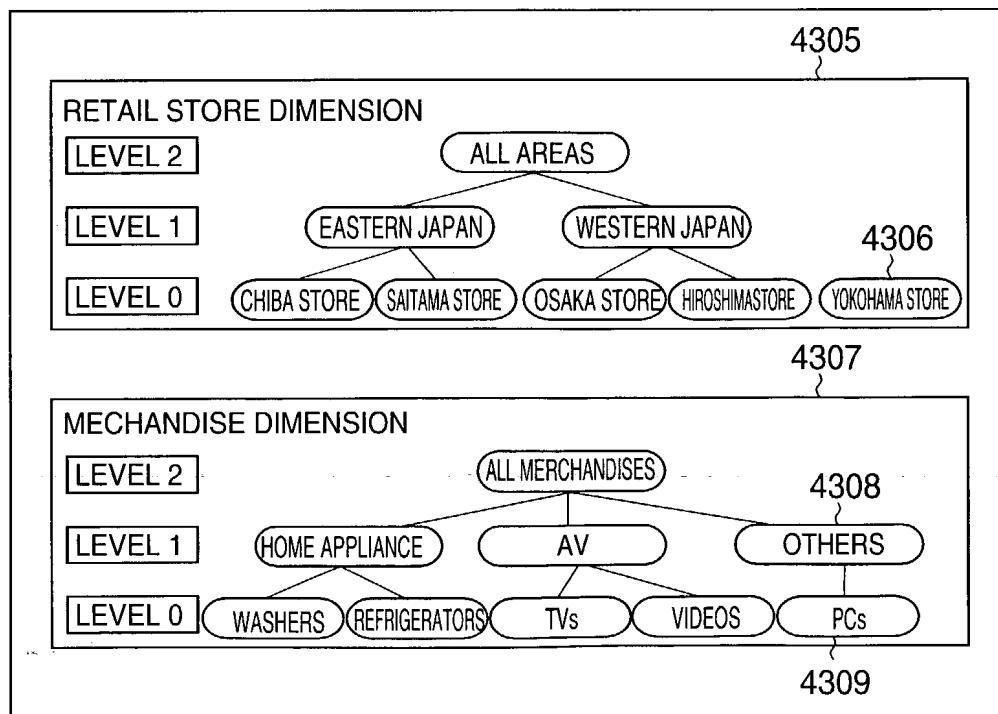
TIME DIMENSION	MERCHANDISE DIMENSION		TVS		1999Q2
	UNIT DIMENSION	SALES AMOUNT	1999Q1	1999Q5	
RETAIL STORE DIMENSION	199901	199902	199903	199904	199905
CHIBA STORE	1100000	330000	770000	2200000	1100000
SAITAMA STORE	990000	990000	660000	2640000	660000
EASTERN JAPAN	2090000	1320000	1430000	4840000	1760000
OSAKA STORE	1100000	1100000	1100000	3300000	110000
HIROSHIMA STORE	330000	550000	1100000	1980000	1100000
WESTERN JAPAN	1430000	1650000	2200000	5280000	1210000
ALL AREAS	3520000	2970000	3630000	10120000	2970000



## FIG.24 PRIOR ART



## FIG.25 PRIOR ART





## FIG.26

### RETAIL STORE DIMENSION LAYER DEFINITION DATA

```
#MAIN LAYER RULE:  
#SEQUENTIALLY APPLYING SUBRULES  
APPLYING SUBRULE STORE_RULE1  
APPLYING SUBRULE STORE_RULE2  
#SUB LAYER RULE :STORE_RULE1  
#FROM CSV FILE, OBTAINING LAYER INFORMATION  
FROM FILE, CSV FILE1  
LEVEL 0=COLUMN 3  
LEVEL 1=COLUMN 2  
LEVEL 2=COLUMN 1  
  
#SUB LAYER RULE:STORE_RULE 2:  
#AFTER CHARACTER ROW CONVERSION ON RETAIL STORE, OBTAINING LAYER INFORMATION  
FROM MEMBER NAME  
LEVEL 0= $ MEMBER NAME  
LEVEL1={  
    S/＼(.JAPAN＼).＼/1/  
}  
LEVEL 2={  
    ALL SALES TERRITORIES  
}
```

~ 3140

~ 3141

~ 3142

## FIG.27

3340

```
199901, EASTERN JAPAN SAPPORO STORE, TVS,17, 1870000  
199902, HIROSHIMA STORE, VIDEOS, 42, 2940000  
199903, EASTERN JAPAN SAPPORO STORE, REFRIGERATOR,15, 1350000
```



FIG.28

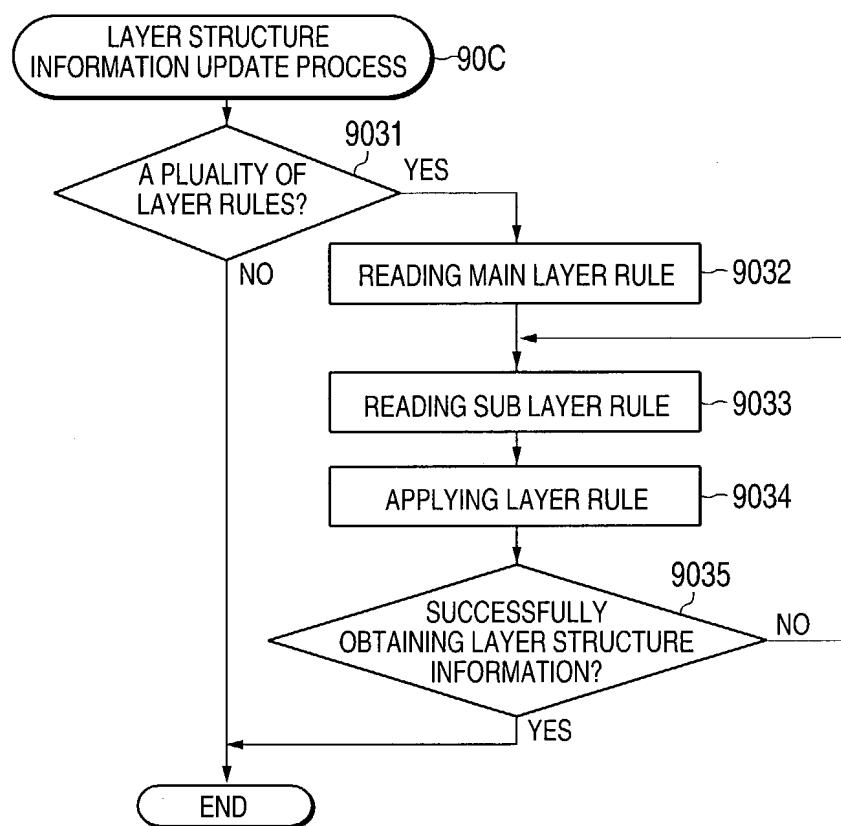


FIG.29

